

Algebra/Topology Seminar

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DEHN FUNCTIONS OF COABELIAN SUBGROUPS

Thursday, February 12, 2026

3:00 p.m. in Massry B012

ABSTRACT. The study of Dehn functions has developed into a major area of research in geometric group theory mainly because the growth types of these functions are quasi-isometry invariants of finitely presented groups. The Dehn function of a finitely presented group G is also connected to the complexity of solving the word problem in G , namely, a finitely presented group has solvable word problem if and only if the Dehn function for a finite presentation is recursive. In this talk, we will discuss new methods for computing the precise Dehn functions of coabelian subgroups of direct products of groups, that is, subgroups which arise as kernels of homomorphisms from the direct product onto a free abelian group. This is joint work with Noel Brady and Rob Merrell.